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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO
10/784,662	02/23/2004	John F. Conley JR.	SLA0674	2287
27518	7590 09/20/2005		EXAMINER	
DAVID C RIPMA, PATENT COUNSEL SHARP LABORATORIES OF AMERICA			WOJCIECHOWICZ, EDWARD JOSEPH	
5750 NW PACIFIC RIM BLVD CAMAS, WA 98607		dea ·	ART UNIT	PAPER NUMBER
		2815		

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)			
	10/784,662	CONLEY ET AL.			
Office Action Summary	Examiner	Art Unit			
•		2815			
The MAILING DATE of this communication ap	Edward Wojciechowicz	<u> </u>			
Period for Reply					
A SHORTENED STATUTORY PERIOD FOR REPL WHICHEVER IS LONGER, FROM THE MAILING D. - Extensions of time may be available under the provisions of 37 CFR 1. after SIX (6) MONTHS from the mailing date of this communication. - If NO period for reply is specified above, the maximum statutory period. - Failure to reply within the set or extended period for reply will, by statut Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	OATE OF THIS COMMUNICATION 136(a). In no event, however, may a reply be tin will apply and will expire SIX (6) MONTHS from e, cause the application to become ABANDONE	N. nely filed the mailing date of this communication. D (35 U.S.C. § 133).			
Status	•				
1) Responsive to communication(s) filed on <u>06 July 2005</u> .					
3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is					
closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213.					
Disposition of Claims					
4) Claim(s) 1-13,27 and 28 is/are pending in the application.					
4a) Of the above claim(s) is/are withdrawn from consideration.					
5) Claim(s) is/are allowed.					
6)⊠ Claim(s) <u>1-13,27 and 28</u> is/are rejected.					
7) Claim(s) is/are objected to. 8) Claim(s) are subject to restriction and/or election requirement.					
o) Claim(s) are subject to restriction and	or election requirement.				
Application Papers	4				
9) The specification is objected to by the Examin	er.				
10)☐ The drawing(s) filed on is/are: a)☐ accepted or b)☐ objected to by the Examiner.					
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).					
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d). 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.					
Priority under 35 U.S.C. § 119		•			
12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of:					
1. Certified copies of the priority documents have been received.					
2. Certified copies of the priority documents have been received in Application No					
3. Copies of the certified copies of the priority documents have been received in this National Stage					
application from the International Bureau (PCT Rule 17.2(a)).					
* See the attached detailed Office action for a list of the certified copies not received.					
Attachment(s)					
1) Notice of References Cited (PTO-892)	4) Interview Summar				
Notice of Draftsperson's Patent Drawing Review (PTO-948) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/06) Paper-No(s)/Mail Date	Paper No(s)/Mail D 5) Notice of Informal 6) Other:	Patent Application (PTO-152)			

Application/Control Number: 10/784,662

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DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-13, 27 and 28 are rejected under 35 U.S.C. 102(e) as being anticipated by Huotari (2004/0106249). The reference to Huotari teaches the inventive process where a very thin barrier layer is formed between a gate dielectric layer and a gate electrode such that the work function of the gate is determined solely by the material of the gate electrode. Specifically, Huotari teaches that the barrier layer may be formed with a thickness of less than 5 nm as claimed. See the discussion at [0036].

In addition, Huotari also teaches using the claimed materials for the barrier layer and the gate electrode. See the discussion at [0020] and [0030].

It is noted that the Huotari reference has an effective filing date of Dec. 3, 2002 based on provisional application 60/430,960. A review of this provisional application shows that the inventive concept of using a barrier layer less than 5 nm in thickness was also disclosed in the provisional application, where Huotari teaches that the barrier layer may have a thickness as little as 1 molecular layer (page 3). In addition, the provisional application teaches that the barrier layer may be thinner than the gate dielectric layer, which, in turn, is disclosed as 3-5 nm in thickness (page 7).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward Wojciechowicz whose telephone number is (571) 272-1739. The examiner can normally be reached on Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (571) 272-1664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Edward Wojciechowicz Primary Examiner Art Unit 2815

EW: ew